

IN THE SPECIFICATION:

Please replace the paragraph on page 24, lines 10-18, with the following:

The process monitoring system 56 further comprises a radiation detector 62 for detecting radiation 64 reflected by the substrate 20. The radiation detector 62 comprises a radiation sensor, such as a photovoltaic cell, photodiode, photomultiplier, or phototransistor, which provides an electrical output signal in response to a measured intensity of a reflected beam of radiation 64 (or an emission spectra from the plasma). The process monitoring system can include an interferometry analyzer 65 to analyze the electrical output signal from the radiation detector 62. The signal may comprise a change in the level of a current passing through an electrical component or a change in a voltage applied across an electrical component. A suitable system for coupling the radiation detector 62 to the chamber 28 comprises a fiberoptic cable 69 leading to the sensor of the radiation detector 62.